

FLIGHT

First Aero Weekly in the World.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

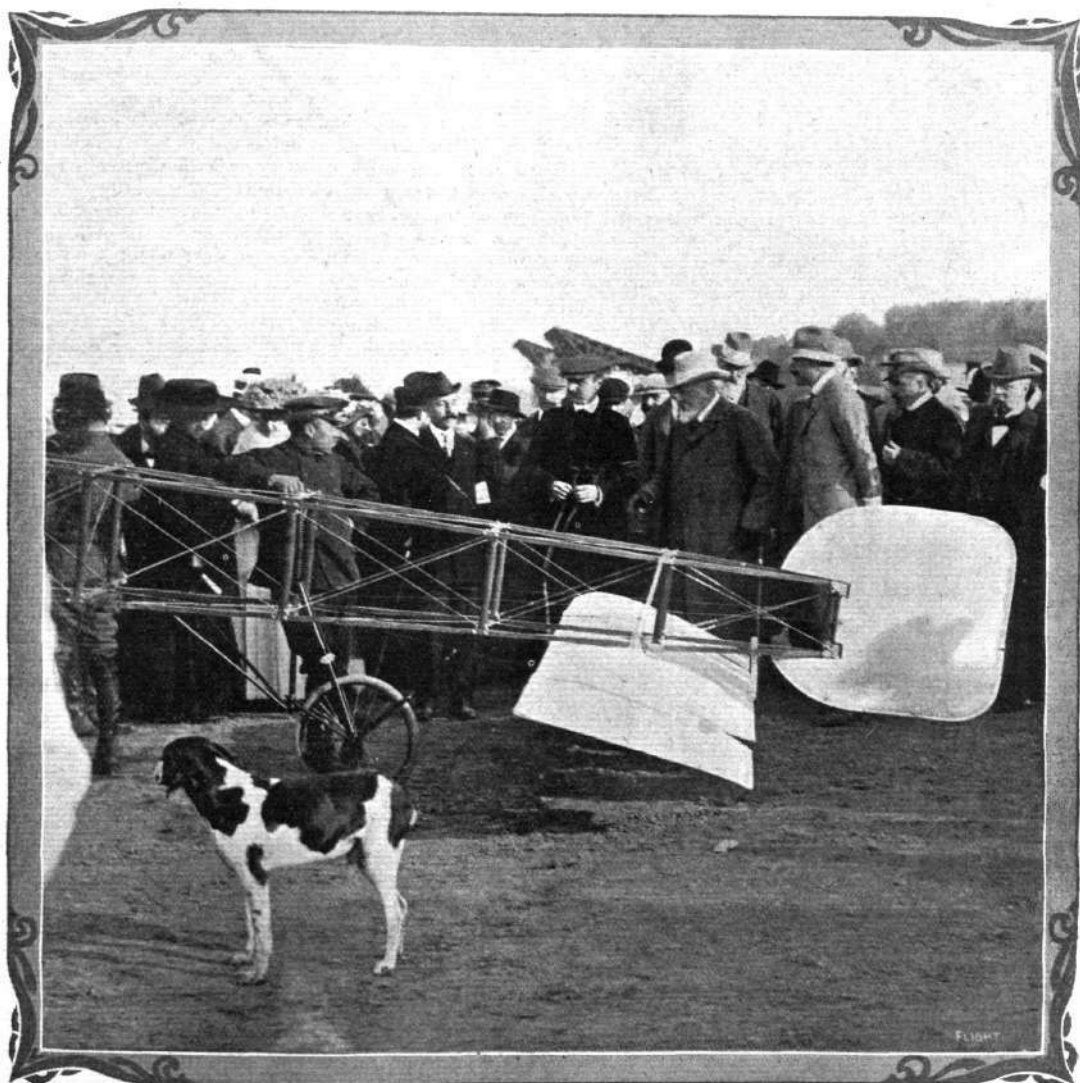
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KING EDWARD AT BIARRITZ AVIATION MEETING.—His Majesty questioning M. Blériot upon details of his monoplane.

INSURANCE UP-TO-DATE.

If any proof were needed that aviation is recognised as among the practical things of everyday life, it surely lies in the fact that it is now possible for the aviator to take out insurance policies covering him against the inevitable risks that he runs in pursuance of his pastime. As may be seen from the business announcements that appear in the commercial pages of *FLIGHT*, we ourselves have arranged—in the interests of our readers, and particularly of that section who are active participators in the development of the new science—to secure for them the most up-to-date methods of insurance that are available.

At present the new "Flight Policy" covers third-party risks alone, *i.e.*, it affords indemnity from claims arising out of possible injury accidentally done to members of the general public, or damage to property. And we think our readers will agree with us that this practically fills the bill for the time so far as the man who flies is himself concerned, since we may take it that in the nature of things the pioneer exponent of flight, who literally takes his life in his hands every time he leaves Mother Earth, has already made up his mind to face the personal risks he runs, and would seldom feel disposed to pay so high a premium as would be necessary to secure compensation for any relatives of his in case of catastrophe. For this reason it is more or less immaterial to him whether or not he can obtain policies of insurance which will cover him financially—or his heirs—against the consequences of the risks he voluntarily runs, whereas it is an extremely serious matter to him—and is, moreover, comparatively inexpensive—to safeguard himself against possible legal liabilities for accidental injury which he may cause to others who are not associated with him, or for damage he may do to their property. It is this that we have already succeeded in arranging in a manner which we believe will prove thoroughly satisfactory to most British aviators, inasmuch as the *FLIGHT* policy is drawn up on perfectly straightforward lines, and is free from vexatious conditions and restrictions.

The matter of personal insurance for the aviator is one that will doubtless receive its proper meed of attention when the time comes, but rapidly as we are advancing towards the time when flight will be as much a part of our everyday life as motoring is now, the moment is not yet opportune for things to develop to quite such an extent as so drastic an innovation would imply. There are very many problems which affect the question, and put it, for the time being, outside the scope of practical politics. In the first place there is the question of premium. Even if it were possible to find underwriters who would be prepared to incur the risk of backing such a policy—which is very doubtful indeed—the cost to the insured would be so high as to be virtually prohibitive, and most would-be insurers would undoubtedly prefer to take their own risks. Another matter which would affect the payment of claims which might arise under such policies would be the difficulty of distinguishing between the *bona-fide* accident and the deliberate smash. In other

words, the question to be answered would be whether the death of the insured aviator was the result of accident or suicide. This is not quite as far-fetched as appears at first sight. It would be quite possible and not a little convenient for an insured person to do rather well for his people by insuring his life and making an aeroplane the instrument of a speedy way out of his troubles, financial and otherwise. And there is a good deal that is attractive in the idea, and which would without doubt appeal to a certain variety of crank with suicidal tendencies. It is all so beautifully simple—the principal actor goes up and comes down. What is left is gathered together, the papers glorify him as another martyr in the sacred cause of progress—and his people draw the insurance. It really sounds very nice and attractive to a certain kind of temperament.

Returning to the consideration of what is practical and practicable, there are several interesting points connected with the special form of policy which we have arranged that are well worth mentioning, and that, needless to state, have a direct beneficial influence upon the premiums that have to be charged. One clause, for example, stipulates that unless the insured person holds a certificate of his competency as a pilot-aviator from one of the recognised aviation authorities, the indemnity under the policy will only hold good while he is in charge of an aeroplane within the limits of a proper practice ground. This at first sight might seem to be a somewhat unreasonable proviso, but it is really a very salutary and necessary limitation. It puts an automatic check on the comparative novice who might otherwise—fortified with the knowledge that whatever damage he might do would concern the underwriters rather than himself—when finding himself in the air for the first time, set off on a wild attempt to establish a new cross-country record in ignorance of the real dangers incurred. And similarly another clause precludes the insured aviator from flying over or within the precincts of any city or town that has a greater population than five thousand—a stipulation which is in accord with the general feeling in aviation circles and with the expressed official opinion of the Royal Aero Club. It is an axiom that no aviator has any right to fly over thickly populated places, and in this matter, as in that of the novice aviator, it seems to us that to cover an aviator against the consequences of lack of judgment or good sense is putting temptation in the way of the more irresponsible.

From what we have just said, it will be realised that *FLIGHT* has made an endeavour to obtain as reasonable a third party policy as possible with the leading underwriters of the day, and that we now offer the benefits of this arrangement to any of our readers who desire to avail themselves of it. Careful attention will continuously be bestowed upon this very important question of insurance, and our readers may rest assured that in the interests of the industry, all *FLIGHT* policies of the future (as well as of the present) will ever have embodied in them all improvements that can reasonably be demanded.

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Patents in Russia.

FROM a Russian correspondent, Messrs. Stanley, Popplewell and Co., learn that there is now under consideration an amendment to the Russian patent law which will, if adopted, restrict, to a certain degree, at

least, the extent of protection of patents granted for inventions in the domain of aeronautics. The amendment will probably provide that all patented inventions relating in any way to airships may be freely employed by the Government in connection with the military dirigibles which are to be built.

THE WHIRLING TABLE AND OTHER APPARATUS AT THE NATIONAL PHYSICAL LABORATORY.

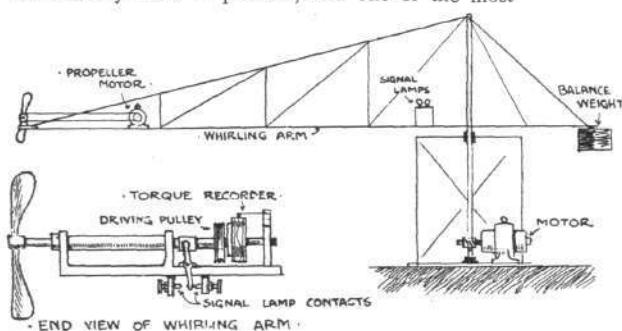
ON March 26th we published abstracts from the annual report of the National Physical Laboratory, which is the headquarters of the Government Flight Office, and now doubtless it will be of interest to our readers to gain some slight idea of the sort of apparatus that is being used there.

The most important device in point of view of size, costliness, and also, it may be said, utility, is the new whirling table that has just been erected. This apparatus occupies a large shed entirely by itself, and yet its purpose is merely to test models of propellers which only measure a few inches in diameter.

It is, or at any rate should be, well known that in order to test a propeller accurately, it must be observed under conditions that are analogous to those under which it will actually work in practice, and one of the most

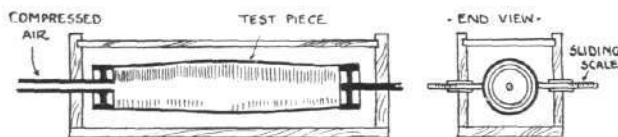
of the test is not to see how fast a propeller will push an object through the air, but to find out what propeller is best suited to provide a predetermined thrust at some predetermined speed of revolution and flight.

The thrust of the propeller is indicated by the automatic illumination of a signal lamp, mounted near the inner end of the whirling arm so as to be more conveniently under observation. The signal lamp is controlled by electric contact operated by the axial movement of the propeller-shaft in its journal. The various instruments are so arranged as to enable a simultaneous observation to be



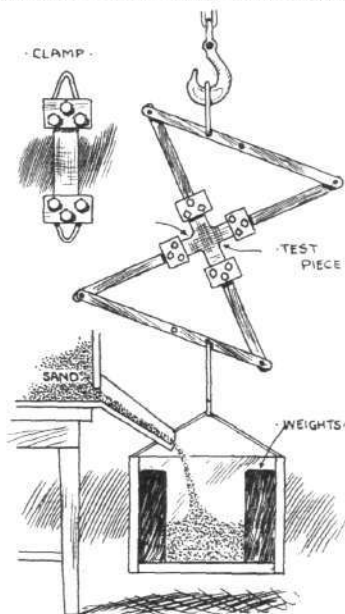
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The Whirling Table at the National Physical Laboratory.—Model propellers are tested on this apparatus.



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Sketch illustrating the National Physical Laboratory apparatus for inflating a dirigible envelope until it bursts.



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Sketches illustrating how aeroplane fabric is tested at the National Physical Laboratory.

important features associated with the practical use of a propeller on a flying machine is that the propeller moves bodily through the air with the flyer itself. It is therefore useless to test a propeller as if it were a fan by allowing it to remain stationary in one spot; it must be made to move through the air at a speed that corresponds to the speed of flight.

A whirling table is an apparatus that enables a propeller to be tested under such conditions, for the whirling table consists of a long arm mounted on a vertical column that is rotated at any desired speed by an electric motor. The whirling arm has to be of very great radius in proportion to the diameter of the propeller in order to neutralise the effect of the curved path.

The propeller to be tested is mounted on the extremity of the whirling arm, and is independently driven by another electric motor carried on the whirling arm itself. The action of the propeller has nothing to do with the rotating of the whirling arm, although the position is such that the whirling arm would rotate under its action were sufficient force developed for the purpose. The object

made of the speed of revolution and speed of flight at the moment the signal lamp is illuminated. The speed of revolution is obtained by calibrating a voltmeter that is in circuit with a small dynamo direct driven from the propeller-shaft. The propeller-shaft itself is driven through a spring so arranged as to enable an automatic record of the torque to be made on a revolving chart.

Among other interesting but less elaborate testing appliances at Bushey House are those used for investigating the strength of aeroplane fabrics. Ordinary tension tests are obtained by stretching a strip of fabric two inches wide between two massive wooden clamps, but there is also an ingenious and very simple apparatus for simultaneously stretching the material along the warp and the weft, with a definite ratio of pull in each direction. In order to graduate the application of the applied load, sand is admitted at a uniform rate into the scale pan.

For testing the bursting strength of the fabric for the envelopes of dirigibles, cylindrical test pieces are inflated inside a box that has sliding scales so arranged as to measure the stretch of the material.

ANOTHER ALL-BRITISH BIPLANE.

DETAILS OF THE DE HAVILLAND MACHINE.

UNFORTUNATELY, the actual machine with which we are concerned in the present article was one that proved to have a very short life, although it is none the less interesting on that account, for two distinct reasons. On the one hand, it is now being replaced by a second machine designed and constructed in the light of the knowledge gained from it; and in the second place, there is much to be learned from the mere fact that this initial attempt at aeroplane building resulted somewhat disastrously. Fortunately for the British industry, Mr. G. de Havilland, its designer and builder, is a man of the type whose enthusiasm and determination is apt to increase rather than diminish after any preliminary setback; while equally fortunate is it for readers of *FLIGHT* that he should be willing to place much of the experience that he has just gained at the disposal of fellow British workers in the interests of the aeronautic movement.

The machine of which we are, by his courtesy, now enabled to give a fully illustrated description, was built

And then it should be added that the past tense has advisably been used in the foregoing paragraph, inasmuch as the first free flight of the machine terminated in almost complete wreckage. The first time that it left the ground it did so after travelling some 40 yards on a downward slope under its own power; it then rose at rather a steep angle, which was corrected by the pilot; and almost immediately afterwards—about 35 yards from the take-off—the left main plane doubled up, causing the machine to fall heavily forward and to the left. Luckily, Mr. de Havilland himself was not hurt, but it will be observed from some of the photographs which we reproduce that the machine as such, apart from the propelling mechanism, the rudder, and the tail, was, for all practical purposes, virtually annihilated by the fall.

As will be observed from what now follows, some important and original features are embodied in this machine, although in general principles there is no radical departure from systems that have proved successful in other cases hitherto. Also, the student of details would do well to bear in mind that this particular machine showed itself to be insufficiently strong for its purpose, thereby, by the way, indicating not only the inadequacy of the cross sections employed, but also the great difficulty that there is in selecting suitable woods for aeroplane construction. To a large extent a form of American whitewood was chosen by Mr. de Havilland, chiefly in order to obtain a good straight grain, but the subsequent fractures indicate an internal softness which was not apparent previously, and we understand that the very much stronger machine now in hand will have silver spruce, ash and hickory in place of the whitewood.

Referring to the special features of Mr. de Havilland's design, it should briefly be mentioned here that these include a neat form of bevel drive for the two propellers in conjunction with the 4-cylinder horizontal opposed engine that also owes its origin to this same designer; while even the propellers themselves are unlike those on other flyers, inasmuch as the aluminium blades are adjustable as to pitch, and as to twist.

Our Illustrations.

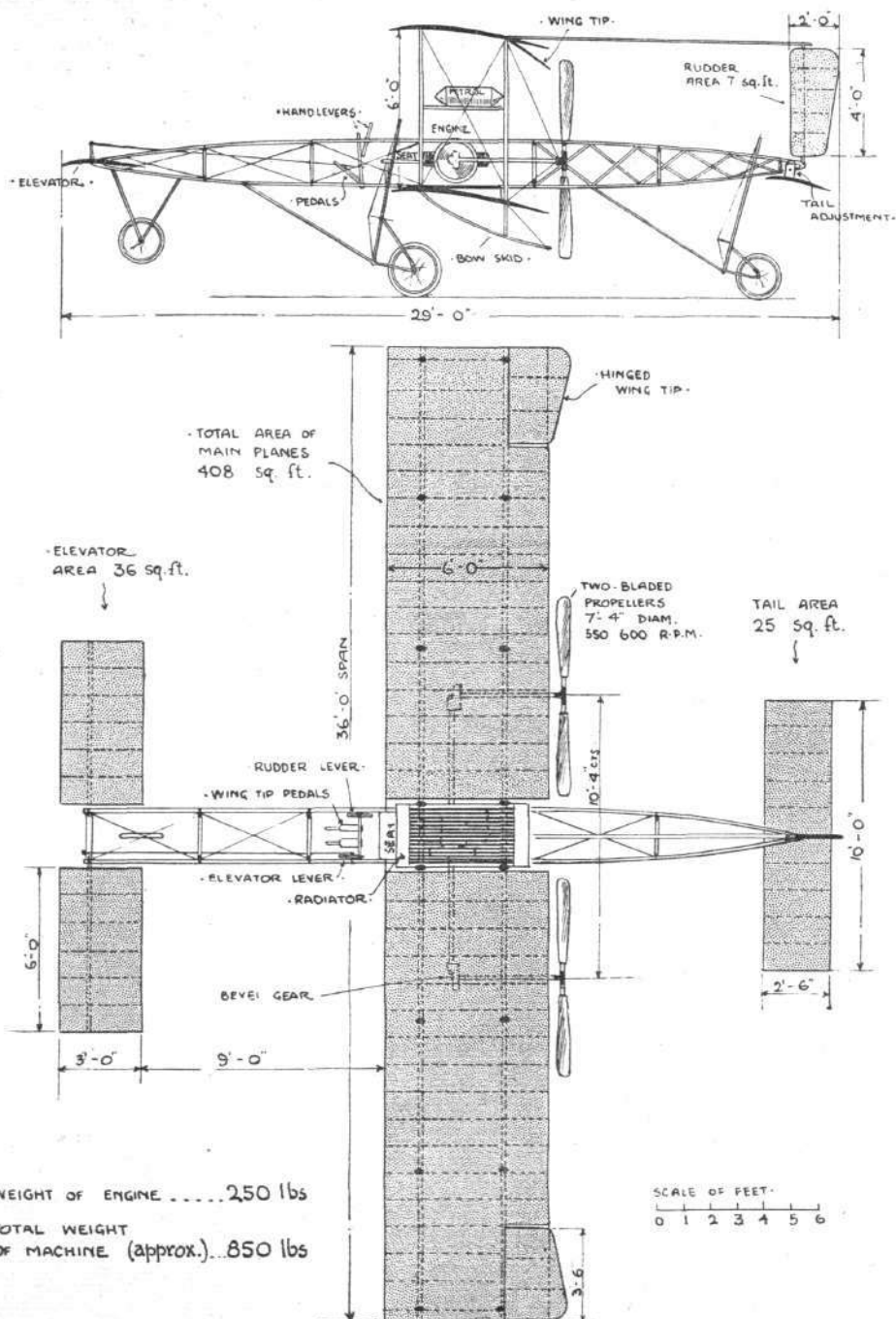
Concerning the photographs that we reproduce herewith, it will be observed that one of these only shows the "Havilland No. I" complete and prior to the accident, while two others were taken from the wreck. The first of these is sufficiently clear to be self-explanatory in very large measure, while the other two repay inspection for the light that they throw upon the whole matter. The remaining photograph includes two views of the propeller, and demonstrates the manner and extent to which the



"Havilland No. I" completed and ready for trial. Note the bevel-driven propellers and the hinged wing-tips.

entirely by himself and by his assistant, Mr. F. T. Hearle. And they it is who are now alone busily engaged with an exceedingly promising "Havilland No. II," although possibly, for the sake of accelerating matters, Mr. de Havilland would feel disposed to consider the advisability of arranging for some other would-be pioneer to join him if the right man were to come forward to help him bear the burden of the undertaking. Needless to say, the expense of building preliminary machines like these is considerable if the task is shouldered, as it has been in Mr. de Havilland's case up till now, by one man only.

Briefly stated the machine in question was a 36-ft. span biplane, having a front mono-elevator, an adjustable mono-tail, a rear vertical rudder, and hinged wing-tips mounted near the extremities of the upper main planes. It was supported on three wheels—one beneath the tail—and was provided with an additional front wheel beneath the elevator, as well as with skids below the ends of the lower main planes. Also it should be mentioned in advance that it was propelled by a pair of bevel-driven screws situated behind and between the main planes on either side of the central girder.



Front elevation and plan of Mr. G. de Havilland's first biplane.

blades are adjustable; while among the line drawings will be found detailed sketches showing the construction of the main girder, of the principal planes, and of the propeller, in addition to the full page that contains scale drawings of the kind that we have made peculiarly our

own. Wherever possible, dimensions have been added to these line drawings, and hence it is unnecessary to repeat this extremely valuable information in the text.

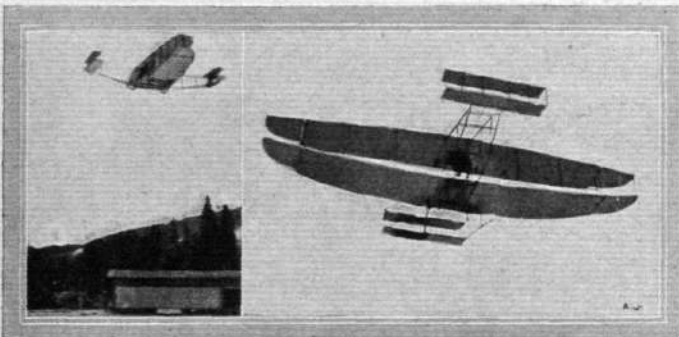
(To be concluded.)



BADDECK NO. 2 BIPLANE.

FROM two photographs which we reproduce herewith a very good idea can be obtained of the "Baddeck No. 2" biplane, with which Messrs. Baldwin and McCurdy have been experimenting for some time at Dr. Graham Bell's

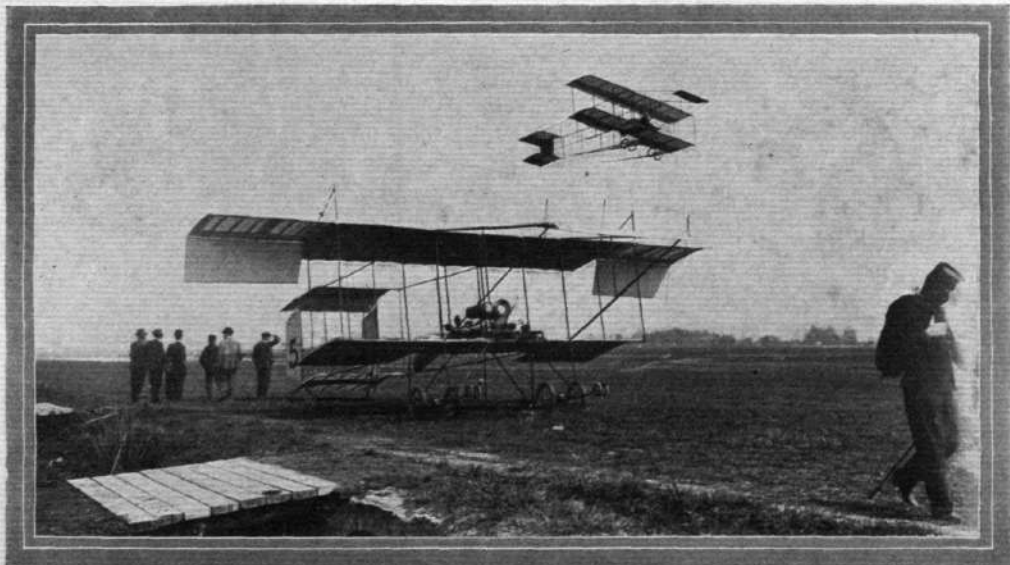
No. 2." They are about 5 ft. by 5 ft. in size, and hinged near their front edges, and are controlled by means of a fork fitting around the aviator's shoulders. The main planes are of 40 ft. span, and have a chord of 7 ft. at the centre, gradually diminishing to 5 ft. at the tips. Fifteen feet in advance of the leading edge is fitted the biplane elevator, the surfaces of which are 12 ft. by 28 ins., placed 30 ins. apart, and the tail, mounted 11 ft. behind the main plane, is of exactly similar size. Steering is effected on a somewhat similar system to the Curtiss machine, a fore and aft movement of the steering-wheel adjusting the elevator, while twisting the wheel operates the vertical rudder.



Two views of "Baddeck No. 2," the biplane with which Messrs. McCurdy and Baldwin have been experimenting at Baddeck, Nova Scotia.

laboratory at Baddeck, Nova Scotia. It will be seen that wing tips are still used for correcting lateral stability and steering, although they are somewhat different in shape to those used on the "Silver Dart" machine, which, it will be remembered, was the forerunner of "Baddeck

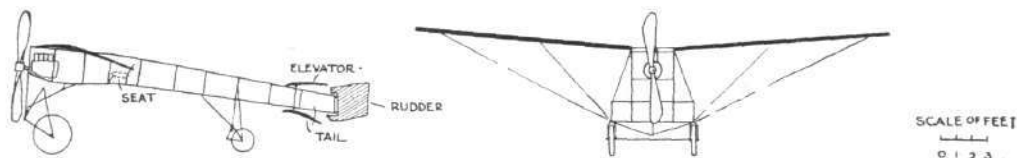
A single propeller of 7 ft. 8 ins. diam. and 6 ft. pitch is fitted, and is chain-driven in the ratio of 3 to 5 from a 6-cyl. water-cooled Kirkham motor of 40-h.p. The radiator consists of thirty flattened tubes $7\frac{1}{2}$ ft. long by 3 ins. wide and $\frac{3}{8}$ in. thick, and they are curved and arranged in a similar way to the main planes, so that they are practically self-supporting when travelling through the air. The photos were taken while the machine was flying over the Bras d'Or Lake, and are reproduced from our contemporary, the *Scientific American*.



AT CANNES AVIATION MEETING.—Crochon flying on a Henry Farman biplane, and passing over Christlaens' machine at rest. The latter, on March 31st, on his Henry Farman, covered 2.2 kiloms., one tour of the aerodrome, in 1m. 34 $\frac{1}{2}$ s., a speed of 84.25 k.p.h., which it is sought to have established as an official speed record.

FLYER SILHOUETTES FROM OLYMPIA.

THE LANE SINGLE-SEATER MONOPLANE.



Leading Particulars of the Lane Monoplane (Single-Seater).

General Dimensions.—Areas—Main planes, 195 sq. ft.; fixed tail, 21 sq. ft.; elevator, 18 sq. ft.; rudder, about 5½ sq. ft.

Lengths.—Span, 30 ft.; chord, 6 ft. 6 ins.; camber, 4½ ins., situated about 24 ins. from leading edge; leverage of rudder, 20 ft.; skid track, 6 ft.; overall length, 24 ft.

Angles.—Dihedral, 1 in 40.

Materials.—Chassis of wood; front carriage of wood and steel tubes.

Engine.—25-h.p. "N.E.C."

Propeller.—Diameter, 7 ft.; pitch, 3 ft. 6 ins.

Weight.—Machine, 285 lbs.; engine, 165 lbs.; driver, oil, petrol and water, 200 lbs.; total flying weight, 650 lbs.; loading (all weight supported on main planes), 3½ lbs. per sq. ft.

Speed of Flight.—30 m.p.h.

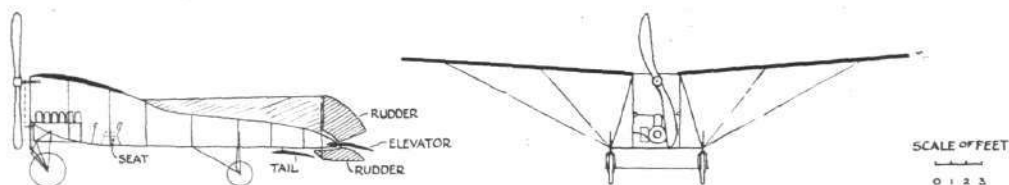
System of Control.—Warping of wings, rudder and elevator.

Price.—£500.

A MONOPLANE of modified Blériot design, having the elevator situated above the fixed tail plane instead of forming the extremities of the tail plane, as is the case in the original Blériot design. The framework is constructed of timber and forms an open lattice box-girder. An original method of anchoring the diagonal wire ties has been devised, which enables the anchor bolts

themselves to be used for the purpose of straining the wires. The suspension of the chassis is also original, elastic springs being anchored to the frame a considerable distance behind the pilot's seat. The machine is mounted upon a pair of wheels, each of which is carried in a special design of triple fork mounted on swivelling bracket.

THE LANE DOUBLE-SEATER MONOPLANE.



Leading Particulars of the Lane Monoplane (Double-Seater).

General Dimensions.—Areas—Main planes, 250 sq. ft.; elevator, 25 sq. ft.; rudder, 7 sq. ft.

Lengths.—Span, 36 ft. 6 ins.; chord, 7 ft. 10 ins.; camber, 7½ ins., situated about 30 ins. from leading edge; skid track, 6 ft.; overall length, 24 ft.

Angle.—Dihedral, 1 in 38.

Materials.—Chassis of wood, front carriage of wood and steel tubes.

Engine.—60-h.p. N.E.C.

Propeller.—Diameter, 8 ft. 8 ins.; pitch, 4 ft. 6 ins.

Weight.—Machine, 550 lbs.; engine, 220 lbs.; driver, oil, petrol and water, 200 lbs.; total flying weight, 970 lbs.; loading (all weight supported on main planes), 3½ lbs. per sq. ft.

Speed of Flight.—30 m.p.h.

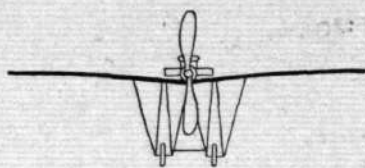
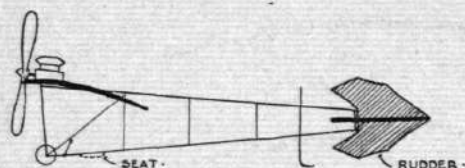
System of control.—Warping of wings, rudder and elevator.

Price.—£800.

THE Lane two-seater was the only example of a monoplane constructed to carry two passengers that was exhibited at Olympia. Its design follows more or less closely on the lines of the single-seated model, the frame being constructed of timber and having the same system of wire straining. The basis of the design is the original

Blériot two-seated monoplane. The engine is situated low down immediately in front of the pilot's seat, and drives a large two-bladed tractor screw by means of a vertical chain. The propeller-shaft is carried on brackets attached to the main frame but is also stayed to the engine crank-shaft by an adjustable strut.

SANTOS DUMONT "DEMOISELLE."


 SCALE OF FEET
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Leading Particulars of the Santos Dumont "Demoiselle."

General Dimensions.—Areas—Main planes, 108 sq. ft.; elevator, 12 sq. ft.; rudder, 7 sq. ft.

Lengths.—Span, 18 ft.; chord, 6 ft. 6 ins.; camber, 3 ins.; skid track, 3 ft.; overall length, 21 ft.

Angle.—Incidence, 7 degs.; dihedral, 1 in 11.

Propeller.—Diameter, 6 ft. 6 ins.; pitch, 2 ft. 6 ins.

Engine.—32-h.p. Clement.

Weight.—Total flying weight, 530 lbs.; loading (all weight supported on main planes), 49 lbs. per sq. ft.

Speed of Flight.—40 m.p.h.

System of Control.—Warping of main planes, combined rudder and elevator.

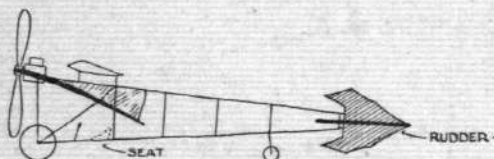
Price.—£300.

A COPY of the original Santos Dumont model, built with a steel triangular frame and other details of construction as described in FLIGHT, Vol. I, p. 604. One of the special features is the fitting of tubular radiators underneath the wings. The engine on this machine is a horizontal twin-cylinder Clement. The pilot sits underneath the wings. Wing warping is effected by a lever temporarily attached to the pilot's back by a

strap. The pilot leans over towards the wing that has been raised by the wind gust in order to restore equilibrium.

In leaning in this direction he reduces the camber of the raised wing, and increases the camber at the extremity of the wing—that is depressed, consequently the lift of the depressed wing becomes greater than that of the other wing.

MANN AND OVERTONS' MONOPLANE.


 SCALE OF FEET
0 1 2 3

Leading Particulars of the Mann and Overtons (Santos Dumont Type).

General Dimensions.—Areas—Main planes, 128 sq. ft.; elevator, 16 sq. ft.; rudder, 6½ sq. ft.

Lengths.—Span, 18 ft. 4 ins.; chord, 7 ft.; camber, 3½ ins.; skid track, 3 ft. 8 ins.; overall length, 20 ft.

Materials.—Wooden frame, tubular steel axle.

Engine.—30-h.p. Anzani.

Propeller.—Diameter, 6 ft. 6 ins.

Weight.—Machine, with engine, 326 lbs.; driver, oil, petrol and water, 200 lbs.; total flying weight, 536 lbs.; loading (all weight supported on main planes), 42 lbs. per sq. ft.

Speed of Flight.—45 m.p.h.

System of Control.—Warping of wings, rudder and elevator.

Price.—£300.

MONOPLANE of Santos Dumont type but having main frame constructed of hollow wood spars, instead of being made of tubular steel. The struts in the main frame, like those in the chassis, are made of tubular steel, as in the original Santos Dumont design. The disposition of the engine and of the pilot's seat is

relatively the same, but the details of control are different. The Santos Dumont type of tail, however, is retained. The lever on the pilot's left operates a rudder by a to-and-fro motion, and the warping of the wings by a sideways movement; on the pilot's right is a lever controlling the elevator.

An Aerial Imposition.

WALKING by a certain school in Birmingham the other day, one of our readers picked up a piece of paper which gives evidence that the masters of that school are up-to-date. It is part of an imposition; set probably as

the result of some youth's efforts at the construction of paper flyers, and one wonders how many times the delinquent had to write out "I must not aviate in school." Doubtless by the time the task was finished, the budding aviator had learned quite a lot of the art of flying, in so far as it related to the passage of his pen over the paper.



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WING SECTIONS.—The above diagrams afford an interesting comparison of the wing sections of aeroplanes exhibited at Olympia. They are all drawn to a common scale, but have been set at an arbitrary angle of incidence, which does not necessarily represent that of the aeroplane in actual flight.

MY FIRST EXPERIENCES IN FLYING.

By PERCY RICHARDSON.

FLYING! The very idea from the commencement fascinated me like it has done thousands of others; and always being keen to get early experiences of new things, as I did in motor cars, I have acquired a monoplane. It came about in this manner. My interest having been enthused by the doings of the flying experts on the Continent, such as the Wrights, Blériot, Farman, Latham, &c., accompanied by two equally enthusiastic friends I motored over to the Aviation Meeting held at Rheims last August, and there spent a most enjoyable and interesting time, learning as much as it was possible for a spectator who had to bluff his way into that strictly guarded paddock to do, and each day getting keener until I worked myself up to order a flying machine.

Choosing the Flyer.

My choice settled on a Blériot monoplane of what is known as the "cross-Channel type" my reasons being that it appeared to fly just as well as any other machines there, and being comparatively small I thought would be the most handy type to teach oneself with a minimum amount of risk. Delivery was promised by the end of December, and during the period of waiting I read up all the matter I could lay hands on in connection with the subject, until by the time I actually received the machine, early in February, I felt, as the Americans would say, that "It would be as easy as falling off a log" to perform all sorts of aeronautical feats in the air. I have had my first experiences at attempting to fly the day I write this, Monday, March 28th, 1910, and though "I have had my fall off the log," as it were, which I found was quite a simple matter, I have not found the art of flying quite so easy as it is possible to persuade oneself theoretically it might be, though from my short experience of one day, which has included *five successful flights and two bumps*, I feel very satisfied with the progress made, and also that by perseverance and patience it will not be so very difficult a proposition after all. The chief handicap I have found is the difficulty of getting any sort of information or instruction on the way to manage the machine from the makers, which is a very serious drawback, and under the circumstances I decided on the only course open to me, and that was to go *cautiously and find out for myself*.

Its Arrival.

At the time of receiving the machine, as the weather was not suitable, and my business prevented my giving any serious time to it, I had it erected in the works of the Sheffield-Simplex Motor Works, in which I am interested, and took the opportunity of studying the details of construction and control. My first experience was whilst I had the monoplane in the works, and that was sitting in the aviator's seat with the engine running. This may appear a very simple thing, but I would recommend this as the first step for any aspiring aviator to take, as personally I found it at first quite disconcerting to sit on a light and apparently insecure structure with a powerful engine having an open exhaust and a large propeller revolving at anything from 1,000 to 1,200 revs. per min., immediately in front of you, and creating a perfect hurricane of wind in which you sit.

Easter being the first opportunity suitable in every way for a trial in the open, I decided to make my first trials then, and owing to the kind generosity of the

Rt. Hon. the Earl Fitzwilliam, D.S.O., who offered me the use of the beautiful park surrounding his Yorkshire country seat, Wentworth Woodhouse, near Rotherham, I had the machine towed over there behind a motor car on Easter Saturday.

On Easter Monday, accompanied by some trustworthy assistants, I went over to Wentworth, where by noon we had got the monoplane together ready for flight.

As I said earlier, I had decided to go at it cautiously, the first intention being just to run along the ground all day so as to get the "feel" of the machine. Well, the fates ruled otherwise, as will be seen.

"Let Go!"

Getting seated, the engine was started up with several helpers hanging on the tail of the machine to keep it stationary. At the signal they released, and off I careered along the ground. Feeling more at home than I anticipated after running about 100 yards, I accelerated the engine and immediately began to rise. At first I felt rather alarmed, but then, gathering my wits together, decided the best thing to do was to stay up for a short distance and then come gracefully down, so I put all the theories I had collected into practice with a view of staying at the height I had reached (which I presumed was only just clear of the ground) so I could make an easy and safe landing. For some reason or other, which I expect I shall learn in the future, theory and practice did not seem to agree, and the machine continued to rise until my experience seemed to indicate the possibility of "looping the loop" backwards; so I thought it time to do something drastic. I did this by altering the angle of the elevating planes so as to bring the machine down, and sure enough down it came surprisingly quickly. I landed with rather a hard bump on the near-side front wheel, which immediately collapsed. *However I had flown, and though perhaps unintentionally, "I had," and that at the very first attempt, of which I felt very proud.* The actual distance I was off the ground was just under 100 yards, and those looking on estimated the height at 15 ft.

On examining the damage it was found the wheel alone had suffered to any serious extent, and that was absolutely smashed beyond roadside repair. Of course I had no spare. In consequence the neighbouring village was searched and produced an old rusty wheel off an ancient motor bicycle, which luckily took the same size tyre, and by dint of ingenuity on the part of my enthusiastic assistants, by three o'clock in the afternoon the machine was ready for flight again.

Profiting by Experience.

In the meantime I had given very careful thought to the cause of my rising so unexpectedly, and came to the conclusion that I had accelerated the engine to too high a speed and adjusted the elevating planes to too great a lifting angle. Concluding that I had not gone as cautiously as I ought, I corrected the two points decided upon in my next attempt by running the engine slower and keeping the elevating planes nearer the neutral angle. The result of this was perfectly satisfactory and enabled me to run about on the ground for about an hour, during which period I learnt to balance and steer the machine rather better. I then decided to have another try to "fly," so the machine was pointed in the direction of a straight run of just about half a mile, commencing with a level piece of about 400 yards, from

which it rose gradually for the rest of the distance at an average gradient of about 1 in 15 to 20. At the word "go" the machine was released, I accelerated the engine and off we went, keeping the elevating planes at nearly the neutral angle, which I found kept the machine on the ground. When nearing the bottom of the hill, I slightly increased the angle, and the machine rose about 3 feet for about 20 yards, and then landed comfortably on the hill.

Pride before—

The machine was then pushed back by the starting point and off we went again. This time I altered the angle of the elevating planes about 150 yards from the hill, with the consequence the machine gradually rose to about 10 feet and landed on the hill a little higher up perfectly safely, having been off the ground for about 120 yards. This was very satisfactory, so I went back to the starting point and had another try. This time I rose earlier and got up to about 20 feet, and landed with rather a bump still further up the hill, having flown just over 150 yards.

The Fall.

These successful attempts fired my ambition, so that I decided to endeavour to get such a height as to enable me to land on top of the hill. So this time I started with the engine going "all out." The machine shot away, and I was very quickly in the air, reaching an altitude of about 30 ft. Everything was going beautifully, and I felt sure of success, but unfortunately, the fates decreed otherwise, for just as I was over the base of the hill the engine stopped and down I came. The machine landed on its front end, and I had just time to carry out the well-known practice of "sitting well back when taking a jump on a horse." In consequence I did not fall out nor was I very much shaken, but unfortunately the beautiful little "Blériot" was badly damaged. The propeller was utterly demolished, as was the "temporary" wheel; the back of the main frame immediately behind my seat was broken in twain, and other parts of the framework were smashed, but strangely neither the planes nor the engine appeared to have suffered at all.

This, of course, put an end to my flying for the day, and also has for a sufficient number of days to enable repairs to be carried out. However, it has left me keener and more enthusiastic than ever, for I have tasted both the "sweets and bitters" of flying, and whilst the former are indescribably fascinating, I have learned that the latter, in the shape of a 30 ft. fall, is nothing like so bad as one is led to imagine, and I feel the cause was excess of ambition on my own part, which, of course, can easily be avoided.

New Impressions.

Now as regards impressions. The first that struck me was, of course, running along the ground. I had imagined from what I had seen at Rheims, Juvisy, and Doncaster that the sensation would be one of being bumped and jolted about to an unmerciful degree; actually I did not find it so. In fact, I found it delightfully smooth and comfortable, more so, if anything, than a perfectly sprung car. There appeared a tendency to sway about a little, which at first made one feel somewhat insecure, but after an hour's running about the ground I was able to keep the machine much more steady, and in consequence gained confidence and felt fairly safe and comfortable.

The sensation when in the air is, as I have previously mentioned, indescribably fascinating. At first the impression is one of floating and of being supported, as it were, by some invisible means. Though the engine is roaring

like a Gatling gun, and the wind is whistling by your ears, you do not seem to hear or notice this.

At first, on finding yourself in the air, one begins to feel rather helpless, more so that I found it very difficult indeed to have even the faintest indication of the altitude. The first time I left the ground, owing to my rising so abruptly, I felt the change in sensation immediately, but in the later flights, until I had attained a height of about 20 ft., I did not appreciate the fact that I was in the air.

The Lag in Control.

Another impression I got was the apparently sluggish action of the various functions controlling the machine. For instance, I found there appeared to be a very appreciable time elapse after the rudder was put over to guide the machine in a certain direction before the direction of the machine responded to it.

The same thing in operating the elevating planes. I found, for instance, when desiring to check a rising tendency and remain at a steady height, that before this effect took place, the machine would continue to rise for some time after I had altered the angle of the elevating planes. This lag, as it might be termed, of the coming into effect of the controlling functions, is, I feel, one of the first things to familiarise oneself with, as otherwise one is likely to get the feeling that the machine will not answer to its control, and, in consequence, a nervousness is apt to creep over the aviator which might result in disaster.

The impression I got in the fall of 30 ft. that I had, was that if you are able to keep a cool head, a fall is not such a serious thing as one would anticipate. In my case the descent was surprisingly sudden, as I was travelling at presumably about 30 miles an hour, and the machine apparently going perfectly, when suddenly the engine stopped, and the machine immediately commenced to drop rapidly. The angle I came down felt very similar to that one experiences when landing with a horse over a fence that has a fairly long drop, and having had a little experience in the hunting field I automatically threw myself well back as one does in taking a jump. In consequence of this, though the machine landed nearly on its head, as it were, I found that I sat rigidly in the seat, only slipping forward a matter of about a foot. Had I not sat well back there is no doubt I should have run the risk of being thrown out. As it was I landed without even being seriously shaken.

Summary of First Day's Flying.

Run No. 1. Length about 250 yards, of which I was in the air for about 100 yards at maximum height of about 15 ft. Came down abruptly, breaking near-side front wheel.

Run No. 2. A series of runs round and across flying space without leaving ground for about one hour.

Run No. 3. Length about 500 yards. In the air about 20 yards at height of about 3 ft. Landed perfectly.

Run No. 4. Length about 550 yards. In the air about 120 yards at height of about 10 ft. Landed perfectly.

Run No. 5. Length about 600 yards. In the air about 150 yards at height of about 20 ft. Landed safely, but with rather a bump.

Run No. 6. Length about 400 yards. In the air about 250 yards at height of about 30 ft. Engine stopped and monoplane fell suddenly to ground, smashing propeller and part of framework.

Total Distance Flown.

Run No.	1.	About 100 yards at height of	15 ft.
"	3.	"	20 "
"	4.	"	120 "
"	5.	"	150 "
"	6.	"	250 "
"			30 "

Total ... 640 yards.

The Royal Aero Club of the United Kingdom

OFFICIAL NOTICES TO MEMBERS

Committee Meeting.

A meeting of the Committee was held on Tuesday, the 5th inst., when there were present:—Mr. Roger W. Wallace, K.C., in the chair, Mr. Griffith Brewer, Mr. Ernest C. Bucknall, Col. J. E. Capper, C.B., R.E., Mr. John Dunville, Capt. A. H. W. Grubb, D.S.O., R.E., Professor A. K. Huntington, Mr. V. Ker-Seymer, Mr. J. T. C. Moore-Brabazon, Mr. C. F. Pollock, Hon. C. S. Rolls, Sir Charles D. Rose, Bart., Mr. J. Lyons Sampson, Mr. Stanley Spooner, and joint secretaries, Capt. E. Claremont, R.N., and Harold E. Perrin.

New Members.—The following new members were elected:—

J. Percival Clark.	Oscar Colin Morison.
Oscar Cüpper.	Percy Richardson.
Lieut. William Spencer	Capt. Somerset Sanderson.
Leveson-Gower, R.N.	John Urwin.
Frank Douglas Grundy.	M. F. Wren.
Robertson Lawson.	Thomas Douglas Wynn Weston.

Bournemouth Aviation Meeting.

The Royal Aero Club, in conjunction with the Royal Automobile Club, have arranged to take the Hotel Burlington, at Boscombe, for their respective members during the aviation week. It is a first-class hotel, standing in 7½ acres of ground, which extends almost to the sea. The accommodation has been taken from July 11th to 16th, inclusive. As there is a large demand for rooms, members are requested to make early application to the Secretaries of either Club.

Council.

The Earl of Hardwicke and Mr. Martin Dale have been unanimously elected to the Council of the Royal Aero Club.

National Aviation Meetings.

The Committee, at their meeting on Tuesday last, had under consideration the applications to hold national aviation meetings during the present year, and the following dates were provisionally approved:—

Huntingdon ... May 14-21	Lancashire Ae.C. July 28-Aug. 3
Doncaster ... June 4-11	Ditto Aug. 15-20
Wolverhampton June 25-July 2	

These fixtures are subject to satisfactory details being supplied to the Royal Aero Club.

British Empire Michelin Cup.

The cup valued at £500 and cash prize of £500, offered by the Michelin Tyre Co., have been awarded to Mr. J. T. C. Moore-Brabazon. The competition for the year ended on March 31st last, and the flight made by Mr. J. T. C. Moore-Brabazon on an all-British machine on Tuesday, March 1st, of nineteen miles, was the longest distance accomplished in the competition. It should be pointed out that the Hon. C. S. Rolls, who did not during the time of the competition own an all-British machine, was not a competitor.

Aero Club Prizes.

On Thursday, March 24th 1910, Mr. Cecil Grace made flights at Eastchurch of 250 yards and a circular mile under official observation, and the Committee have awarded him the last two Club prizes amounting to £25 and £50 respectively.

Members Abroad.

Several members who have been taking lessons abroad have made great progress, Lieut. L. D. L. Gibbs, Capt. Bertram Dickson, Mr. C. Grahame-White and Mr. Somers Somerset all having made long flights. Mr. Grahame-White, who has recently acquired a Farman machine, will shortly make an attempt for the London to Manchester Prize of £10,000 offered by the *Daily Mail*.

Aviator's Certificate.

The Committee at their meeting on Tuesday last, granted an Aviator's Certificate to Mr. A. Rawlinson.

E. CLAREMONT, CAPT. R.N.,
HAROLD E. PERRIN,

166, Piccadilly. Joint Secretaries.

PROGRESS OF FLIGHT ABOUT THE COUNTRY.

Bristol and West of England Aero Club.

At a general meeting, held at the Grand Hotel, Bristol, on the 4th inst., Mr. Alan Jenkins was appointed hon. secretary of the club, and the following were elected to serve upon the General Committee:—Sir Herbert Ashman, Bart., Messrs. A. E. Catford, C. Bruce Cole, C. Chester-Master, C. K. Fry, P. H. Francis, F. J. Mallet, Harold Robinson, S. E. Smith, H. White Smith, P. A. Thompson, and H. H. Wills. The president, vice-president, treasurer, and secretary are ex-officio members of the committee.

The question of headquarters was discussed, and it was proposed by the chairman, Mr. Samuel White, that they should be at the Clifton Down Hotel if suitable arrangements could be made, and the matter was left in the hands of the committee.

The question was raised as to the possibility of an aviation meeting in Bristol, but the chairman pointed out that the matter was not so simple as it might appear. A glance at a map might suggest that there was a splendid site on the banks of the Severn, but when this place was examined, as was done the other day, when he accompanied a French gentleman over the neighbourhood, it would be found that the reeds, hedges, timber, &c., offered serious obstacles to the project. The members, however, might rest assured that this side of the question was well to the fore in the committee's mind.

Glasgow Model Aero Club (101, ST. VINCENT STREET).

At a general meeting of the Glasgow Model Aero Club, held in the Band of Hope Hall, 94, W. Regent Street, Glasgow, on April 1st, an interesting and highly-educative paper on "Form and Design" was given by Mr. Cunningham. The principal types of aeroplanes were dealt with in a masterly manner by the lecturer, and he earned the hearty vote of thanks accorded him by the members present.

The club has a monoplane glider, designed and built by Mr. W. Crebar, Hon. President, at the flying grounds, Barrhead, where some very successful trials have taken place.

A flying competition is being arranged to take place at the grounds on an early date, and everything is being done to stimulate the interest of interested persons in Glasgow and district.

The membership is steadily growing, and the club will, no doubt, prove an asset to matters aeronautical in Scotland. Prospective members might please communicate with the secretaries at above address.

Hampshire Aero Club (48, PALMERSTON ROAD, SOUTHSEA).

As already notified, it has been resolved to hold a model flying competition in the neighbourhood of Portsmouth some time in June or July, the exact date and place to be hereafter stated.

The principal rules and conditions are as follows:—

1. There shall be no entrance fee.
2. Models shall not exceed 10 lbs. in weight; otherwise there are no restrictions as to size, &c.
3. Models shall be started by hand only.
4. Five essays shall be allowed to each model in each competition.
5. Models shall be started from a circle of 6 ft. diameter, in any direction which the competitor may choose.
6. Prizes will be awarded for length of flight only, measured in a straight line from start to finish.
7. There shall be four competitions as follows:—
A. Open to the world.
B. Open to members of the H.Ae.C.
C. Open to juveniles under 16 only.
D. Consolation prize, open to non-winners who have started in previous competitions.
8. Prizes range in value from £2 downwards. There shall be three prizes in each competition.

Competitors are requested to send in their names and the number of models they intend to fly to the secretary on or before June 1st. Inquiries to Capt. F. W. Marriott, 48, Palmerston Road, Southsea.

AVIATION INVESTMENT AND RESEARCH, LTD. (A.I.R.)

UNDER the above suggestive title a new Company has been formed with a share capital of £100,000, the full prospectus of which appears in our current issue.

The capital is divided into 99,000 ordinary shares of £1 each and 80,000 deferred shares of 3s. each, the present issue consisting of 80,000 of the ordinary shares, of which it is proposed to call up at present 5s. per share. The deferred shares do not rank for dividend until subscribers to the ordinary shares have received dividends to the full amount of the ordinary capital paid up. All subsequent profits are then divided between the ordinary shareholders and the deferred shareholders.

The intentions and scope of the Company, according to the prospectus, are of a most commendable character, and in very striking contrast to the early company promotions which were so adversely associated with the introduction of motor cars to this country. There are no promotion profits to be paid to any promoter or vendor, either in cash or shares, the only commission being that of 5 per cent. for underwriting upon 25,000 shares of the present issue. The entire capital therefore subscribed, less the preliminary expenses, underwriting, and brokerage, will be available for working capital.

The scheme of the Company is, starting entirely free and uncommitted in any direction whatever, to investigate and turn to commercial advantage the various industrial branches already establishing themselves in aviation. For this purpose the directors will be prepared to assist, financially or otherwise, in developing inventors' ideas and other established rights, with the ultimate object of placing such inventions on the market in a commercial form, whether it be by means of subsidiary companies or by the parent Company itself. In order to guard in the best possible manner against taking up any mere ideas of cranks, a very strong basis of safety has been arranged, whereby under various branches special expert committees have been appointed who will investigate the comparative merits of anything placed before them, and in an entirely unprejudiced manner report, for and against, on their possibilities. With this very valuable information in their hands, the directors

will then be in a position as business men to take up such things as seem to them the most likely to result to the benefit of the Company. These various branches are divided as follows:—

1. **Aeroplanes and Dirigibles**, with such well-known names on the committee of advisors to the Company as Major Baden-Powell, Sir Hiram Maxim, the Hon. Maurice Egerton, Messrs. J. T. C. Moore-Brabazon, and T. W. K. Clarke.

2. **Motive Power and Propellers**, with a Committee consisting of Professor Alexander Liwentaal, Messrs. B. S. Kemp, Frederick R. Simms, S. A. Marples, and Warwick Wright.

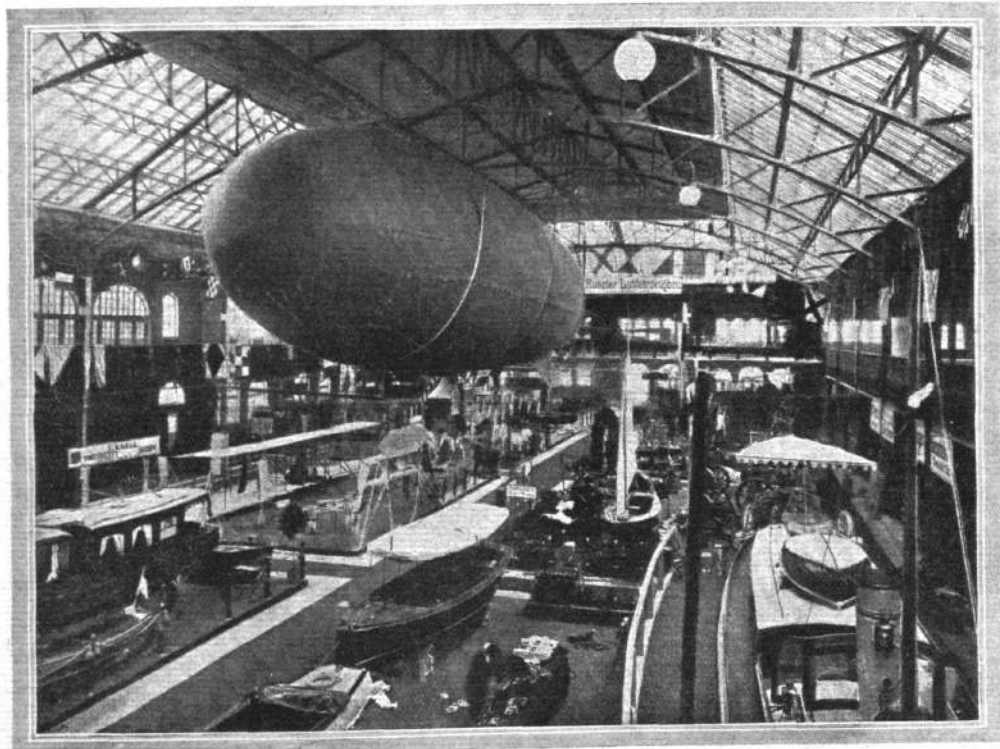
3. **Sites for Sheds, Aviation Grounds and Factories**. Committee, Messrs. J. H. Oakley, E. E. Cronk, G. F. Collinson, H. F. Cobb, and E. E. Williams.

4. **Appliances in General**. Committee, Messrs. Walter F. Reid, J. D. F. Andrews, C. Grahame-White, R. M. Balston, and Bernard Redwood.

All these gentlemen in their own particular spheres carry weight in regard to the subjects upon which they will give their reports, and it appears to us from the prospectus that the Company in view of the early stage of the industry at which it is being founded, enabling the very best advantage to be taken of the vast sums which are likely to be made in the industry, which has already made such extraordinary strides in the last eighteen months, should have a very fine career before it so long as the management and work is carried out with the foresight which everything promises.

The directors are:—Vice-Admiral Sir Charles Campbell, Mr. P. Harrington Edwards, Mr. Sidney Martin Edwards, Mr. Harold B. Everett and Mr. Alexander T. Penney. Needless to say, already a number of important inventions and undertakings have been brought before the directors, so that no time need be lost in the committees getting to work and making their reports, so that if found desirable one or any of the projects may be pushed forward, so as to take advantage of the present rapid progress in aeronautics.

The lists open on Monday next, April 11th, and close on or before the following Wednesday, April 13th, the offices of the Company being at 33, Southampton Street, Strand, W.C.



INTERNATIONAL FLIGHT AND MOTOR BOAT EXHIBITION AT BERLIN.—General view in the main hall of the Exhibition.

AVIATION MEETINGS.

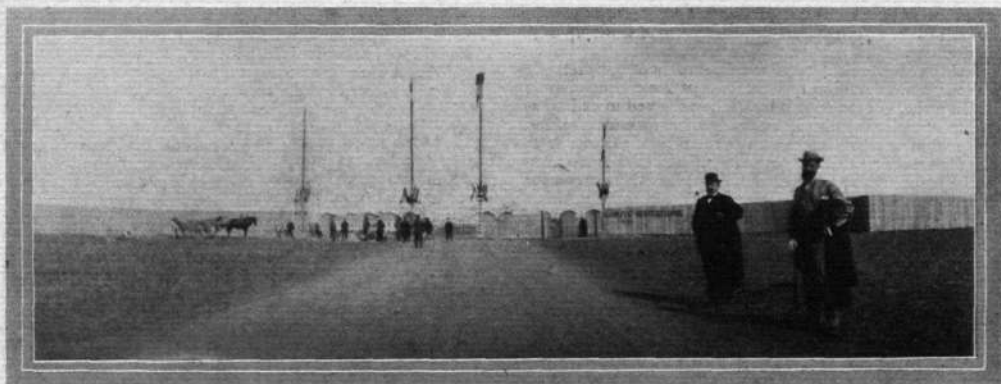


Photo by M. L. Ventre.

AT LE CRAU AERODROME.—View of the entrance to the flying ground. On the right are M. Theo Gillibert, the Manager, and M. Sicard, Chief Administrator.

Cannes Meeting.

CANNES, like other resorts on the south coast of France, suffered from the squally weather during the latter part of last week, and so the programme for the flying meeting was considerably interfered with. In consequence, it was decided to prolong the meeting for a couple of days to Tuesday. Taking up the story from the conclusion of the second day's doings, where we had to break off last week, we have to record that on the 29th ult. the wind prevented any flying until late in the afternoon, when there was quite a splendid exhibition of flying. Edmond was in the air for 59 mins. 32 secs., and then only came down because his fuel supply ran out, while his confrères Crochon and Christiaens, also on Henry Farman machines, flew for 35 mins. 58 secs. and 21 mins. 24 secs. respectively. The other flights during the evening were by Baratoux (Wright) 18 mins. 2 secs., Popoff (Wright) 7 mins. 18 secs., and Molon (Blériot) 14 mins. 7 secs. The only flights on the following day were by Popoff and Edmond, but neither exceeded 10 minutes altogether; while, on the 1st inst., a similar state of things occurred, although Christiaens, Baratoux and Molon were also out. Friday and Saturday were blank days, as the storm of wind and rain caused all the flyers to stay indoors. Sunday witnessed an extraordinary performance on the part of Popoff, who, although he had not previously accomplished anything particularly noteworthy, flew from the Napoule racecourse out to the Isle of St. Marguerite and back, a distance of about 11 miles, the time taken being 18 mins. 20 secs. During this trip Popoff was certified to have attained a height of 207 metres, and thus secured the altitude prize. The only other flight was by Christiaens, who flew for 1 hr. 2 mins. On Monday this same flyer

flew for 53 mins. 6 secs., and the other noteworthy flights were by Molon and Popoff, the former flying for 28 mins. 27 secs., and the latter 27 mins. 23 secs. While Popoff was flying, at a height of about 20 metres, one of the cylinders of his motor burst, but he was able to glide to the ground safely.

The Niort Meeting.

A SERIES of short flights by De Lesseps, Busson and Noel, all mounted on Blériots, constituted the programme of the meeting held at Niort last week. The best performances were a 24-minute flight by De Lesseps, during which he attained a height of 400 metres, passing over Niort and circling the church steeple.

The Biarritz Meeting.

WIND and rain combined to spoil the Biarritz meeting, but whenever there was an opportunity Chavez, on his Henry Farman machine, and Leblanc, on his Blériot, went up, and these two flyers shared the prize money. Chavez secured the biggest prize for altitude by flying to a height of 450 metres during a trip which lasted 55 minutes on Saturday last. Leblanc took the prize for longest distance flown, although none of his individual efforts were very lengthy.

Doings at Crau.

NO flying was possible at Crau at the end of last week, and the meeting resolved itself into an exhibition of flying machines for several days, the managers allowing the public to pass through the sheds in single file. On Monday, Nogues and Metro were flying on their Voisins, when the latter achieved the record flight of the meeting, 15 mins. 25 secs.



Photo by M. L. Ventre.

AT LE CRAU AERODROME.—An Antoinette machine ready for flight. In front are Mdle. Linda Venderbar, a lady flyer, and MM. des Jardins and Barthes, engineers.

Rougier and Van den Born at Florence.

TREACHEROUS squally winds seriously interfered with the intentions of the organisers of the flying meeting at Florence, and proved to be the undoing of Rougier. He was flying on the 29th ult. at a height of about 100 metres, when a squall carried him out of his course against the grand stands. He therefore cut off the ignition, intending to glide down to earth, but another sudden squall caught the machine and dashed it to the ground, with the result that the right wing was smashed. Better conditions prevailed on Sunday last, when Van den Born effected a number of short flights, several of them with passengers.

Nice Meeting.

THE flying meeting which opens at Nice on Thursday next promises to be a very successful one, and Great Britain will be represented by the Hon. C. S. Rolls, with his Short-Wright machine, and Mr. A. Rawlinson, with his Farman biplane. The other entrants are Rougier (Voisin), Latham (Antoinette), Grade (Grade), Riemsdyck (Curtiss), Sands (Antoinette), Mortimer Singer (Farman), Van den Born (Farman), Metrot (Voisin), Duray (Farman), Effimoff (Farman), Chavez (Farman), Olieslagers (Blériot), Swemon (Voisin). It is hardly likely, however, that Mr. Mortimer Singer will be able to be present.

THE FATAL ACCIDENT TO M. LE BLON.



The late M. Le Blon flying over the rocks and sea at San Sebastian last week. It was upon a later day that the disaster which ended fatally, occurred.

YET another aviator has been added to the list of those who have lost their lives in pursuit of the new sport, this being M. Le Blon, who by his flying on his Blériot at Doncaster and in Egypt, as well as at various places in France, had shown himself to be a very clever flyer. The accident occurred at San Sebastian, while M. Le Blon was using a similar machine to that on which Delagrangé met his death, and it would seem that the accident was partly due to the same cause—that the machine was overpowered. Although his contract had come to an end on the previous day, Le Blon, in spite of the strong winds, determined to give an exhibi-

tion flight over the sea. He rose to a height of about 150 ft., and after flying for some distance turned to come back. It was then seen that the machine stopped, and a moment later it fell into the sea.

Unfortunately, as no flying was anticipated, no boats were at hand, and it was some time before he could be rescued. According to the medical evidence, death was due to drowning. As the motor was found to be intact, it can only be surmised that the abnormal strain proved too much for the construction, and so caused the planes to collapse.

British Michelin Trophy Winner.

AT the meeting of the Royal Aero Club Committee, on Tuesday evening, the British Michelin Trophy for the year ending March 31st, 1910, valued at £500, together with the cash prize of £500, was officially awarded to Mr. J. T. C. Moore-Brabazon for his flight of 18½ miles at Eastchurch on March 1st. This was the best distance accomplished by a British aviator officially entered. The machine used was the All-British Short, fitted with a Green engine.

The Blériot Memorial.

ON Friday of this week the formal inauguration of the Royal Aero Club Blériot Memorial took place at Dover, when Lord Brassey, Lord Warden of the Cinque Ports, unveiled the stone replica of the Blériot machine, the cost of which was generously borne by Mr. A. Duckham, a member of the Club. It has been fixed in the ground at the spot where M. Blériot landed after his cross-Channel flight. M. Blériot travelled specially from Pau in order to be present at the ceremony, and invitations were also sent to the President of the Aero Club of France and the Mayor of Calais. After the ceremony the principal guests were entertained at luncheon in the Town Hall.

Doings at Eastchurch.

THE Duke of Westminster visited Eastchurch on Sunday for the purpose of flying on Mr. A. Rawlinson's Henry Farman machine, but was disappointed owing to the biplane being under repair. Later in the evening Mr. Rawlinson flew for a few miles. The Hon. C. S. Rolls was also flying his Sommer machine for the first time; while Mr. Warwick Wright made several short trial runs on his new Howard-Wright monoplane.

Mr. A. Rawlinson has been granted the aviator's certificate of the Royal Aero Club.

British Flyers at Chalons.

THREE British aviators were flying at Mourmelon, Chalons, during the evening of the 28th ult., all of them on Henry Farman machines. Captain Dickson only secured his own machine on that day, and immediately, in a gusty wind, flew a distance of about 19 miles on it. Lieut. Gibbs also made a short flight, while Mr. Claude Grahame-White flew for 1 hour 5 mins., and later took up his mother for a short flight. On Sunday morning Lieut. Gibbs flew for 1 hour 12 mins.

AVIATION NEWS OF THE WEEK.

The Lanark Meeting.

At a meeting, held in Glasgow on Monday, of the Organising Committee of the Lanark Flying Week, from August 6th to 13th, the Duke of Argyll was unanimously elected hon. president of the meeting, while the Duke of Hamilton, the Duke of Montrose, the Earl of Kintore, Lord Inverclyde, Lord Elphinstone, Lord Newlands, Lord Lamington and Lord Colebrooke were elected hon. vice-presidents. Mr. W. H. Knight and Mr. W. G. Duncan, secretary of the Scottish Aeronautical Society, were appointed joint managers. It was reported that the guarantee fund amounted to £10,800, and it was decided to make a further appeal for funds.

A Blériot at Brooklands.

SEVERAL very good short flights were made by Mr. Lionel Mander, one of Mr. Claude Grahame-White's pupils, on a Blériot monoplane, at Brooklands, on Saturday. The machine has a three-cylinder Anzani engine, and previous to the flights was fitted with a new Chauvière propeller. The last trial of the day consisted of an almost complete circuit of the flying ground, and in landing the chassis was slightly damaged, owing to one of the wheels sinking in some soft sand. This did not prevent Mr. Mander flying back to his shed, however.

An Aviator Wanted.

THE hon. secretary of the Scottish Aeronautical Society, Mr. Walter G. Duncan, has several inquiries for an aviator who would give one-day exhibition flights at the larger sports meetings in various parts of Scotland. The meetings will probably not take place before July or August. We shall be pleased to forward on any applications.

Model Competition at Eastbourne.

IN connection with the annual sports of the Eastbourne Rovers C. and A.C., at Devonshire Park, on Whit Monday, it has been suggested that some competitions for model aeroplanes should be organised for prizes offered by the club. The secretary, Mr. J. H. Bartoft, 20, Pevensey Road, Eastbourne, will be glad to hear from any model clubs or flyers who would care to take part.

Blériot Flies 1 Hour 15 Mins.

ON his new machine, fitted with a Gnome engine, M. Blériot flew for an hour and a quarter at Pau, on the 2nd inst.; while, on the previous day, although there was a strong wind blowing, he completed three rounds of the course without difficulty.

Wright Pupils at Pau.

AT the Wright aerodrome at Pau, Rene Gasnier made a flight of 23 kiloms. on the 29th ult. After a shorter flight in the evening, he left Pau for ten days; but his place was taken by M. Gustave Gasnier, who made his first solo flight on his Wright machine on the 2nd inst. This flight was ended by gliding down, with motor stopped, from a height of 25 metres.

Sixty-eight Miles Across Country.

IT is not often that a new machine has so propitious a start to its career as that secured by the Tellier monoplane. It is less than a month ago since M. Dubonnet commenced experimenting with the machine, and yet on Sunday last he succeeded in carrying off the prize of 10,000 francs (£400) offered by *La Nature* for the first cross-country flight of 100 kiloms. in a straight line. M. Dubonnet started from a field at Draveil, near Juvisy, where he has been trying the machine, and rising to a height of between 300 and 400 ft. he headed for Orleans, following the railway line. Passing over Arpajon he kept to the left of Etampes and Toury, went over Artenay, and passed Orleans to the right, eventually landing at La Ferte-St. Aubin, 110 kiloms. away from the starting point, after a flight lasting 1 hr. 50 mins. About 200 people, including the officials of the French Aero Club, assembled at the landing place to welcome the aviator, who, although only a tyro, had won a prize which many prominent aviators have unsuccessfully tried for. It will be remembered that two photographs of this machine, which is fitted with a Panhard motor, appeared in our issue of the 26th ult.

Farman and Paulhan at Etampes.

ON the 1st inst., although there was a very strong wind blowing, Mr. Henry Farman made a couple of flights with passengers at his new aerodrome near Etampes. Paulhan arrived the same day, and arrangements were made for him to attempt to win the *La Nature* prize on Tuesday, but in the meantime Dubonnet had secured the stakes, as mentioned above.

One-Hour Flight by M. Sommer.

ON Monday, at Mouzon, M. Sommer made a very fine performance, by flying across country for 1 hour 5 mins. on his new biplane, and passing over in the course of the trip Douzy, Bazelles, Remilly, Autrecourt, Villiers and Mouzon. Subsequently M. Sommer carried the Princess of Croy in his machine for a short distance, and his sister, Mme. Thiebaut, was favoured with a similar experience, while later Bouvier, one of the pupils, flew for 35 mins.

On the 29th, M. Sommer flew with Legagneux for 50 mins., at an average altitude of about 150 metres.

Effimoff at Chalons.

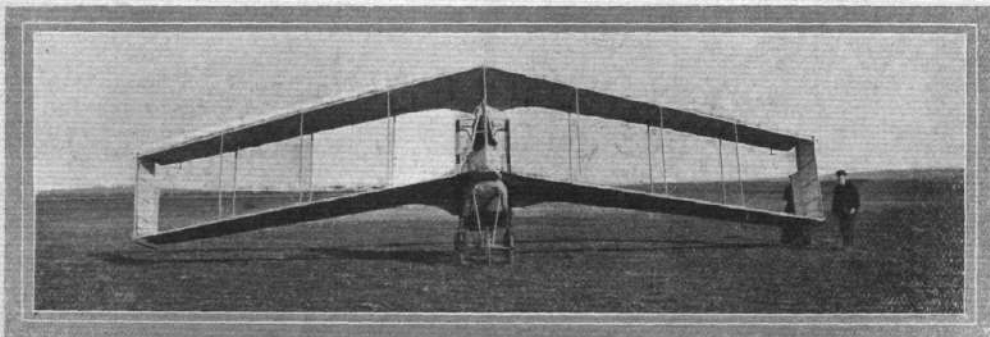
EFFIMOFF, having obtained delivery of his new Henry Farman machine, was trying it on Saturday, and carried out some splendid flights over the country surrounding Chalons, and the following day he flew with two lady passengers, Mmes. Bird and Frank.

Kinet Flies for an Hour with Passenger.

LAST Saturday, at Chalons, Daniel Kinet, on his Henry Farman machine, carried a passenger for 1h. 2m. 30s.

A Railway Station at Betheny.

IN connection with the forthcoming aviation week at Rheims, the Eastern Railway of France are arranging for the erection of a



Lieut. Dunn's Blair Athol Aeroplane, "No. 5," at Eastchurch, the Royal Aero Club's Flying Grounds.—View from the front. At first glance the above photograph conveys the impression that the machine has the planes set at an "inverted" dihedral angle, but this effect is only due to the fact that the planes on either side of the body slope backwards. The Dunn biplane is the most remarkable and interesting machine yet constructed, for it is tailless and without an elevator, being designed to have natural stability. Steering is effected by hinged flaps behind the extremities of the main planes.

temporary station just by the aerodrome, in the Plains of Betheny, to accommodate the crowds going to the meeting.

Olleslaegers at Seville.

HAVING obtained delivery of his new Blériot monoplane, Olleslaegers has been giving exhibition flights on it at Seville. On the 29th ult. he flew for 25 minutes at a height of 100 metres, several times flying over the Guadalquivir; but the inclement weather has been against flying since then, although he ventured out for 6 minutes on the 2nd inst.

Mamet at Madrid.

ON Monday, Mamet made a couple of flights before the Queen of Spain. One was of 10 minutes' duration, while in the second trip he flew for about twice that time. In both his altitude was about 250 metres.

Practice at Johannisthal.

ON Monday evening there was a busy time at the Johannisthal flying ground, near Berlin, Keidel, Jeannin and Brunnhuber each making several flights on their Wright machines, the first-named being accompanied in each trip by one of his pupils. The longest flight was of 15 minutes, by Jeannin.

A Voisin at Padua.

Two flights, each three kiloms. in length, and at a height of 10 metres, were made by Leonino da Zara on his Voisin at Padua on Monday.

A Farman Biplane at Indianapolis.

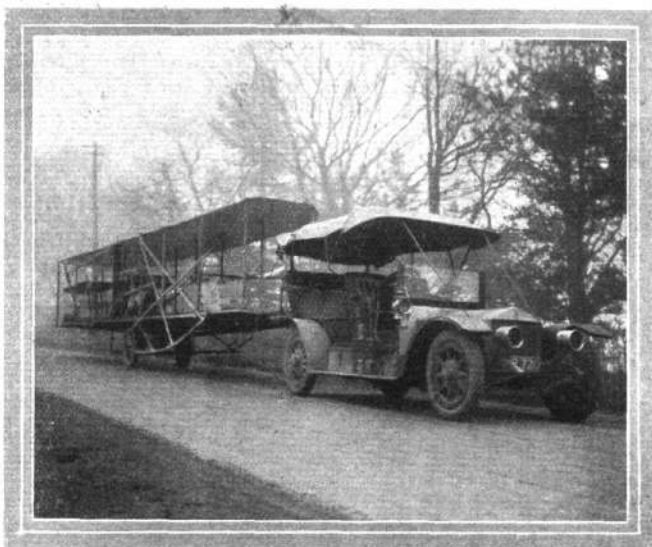
THE motor track at Indianapolis is being found useful as an aerodrome, and Mr. J. W. Curzon has taken up quarters there with a Henry Farman biplane.

"Scientific American" Trophy.

FOR the year 1910 the competition for the *Scientific American* Trophy has been made international, and it will be awarded to the aviator who makes the longest cross-country trip exceeding 50 miles, the only stipulation being that it must be flown in the United States.

"Ville de Pau" has a Trial Trip.

THE new Astra dirigible, "Ville de Pau," was given its first trial trip, at Pau, on Saturday last, and during the half hour it was cruising over the neighbourhood it carried 14 passengers, among them being M. and Mme. Blériot and Mr. Claude Grahame-White. This constitutes a French record as regards passenger carrying. On Monday a longer trip, lasting some 50 minutes, was made successfully, the vessel reaching a height of 1,350 ft. Just as the airship was leaving its shed M. Blériot flew over and round the shed, and this visit was returned by the airship circling round M. Blériot's aerodrome.



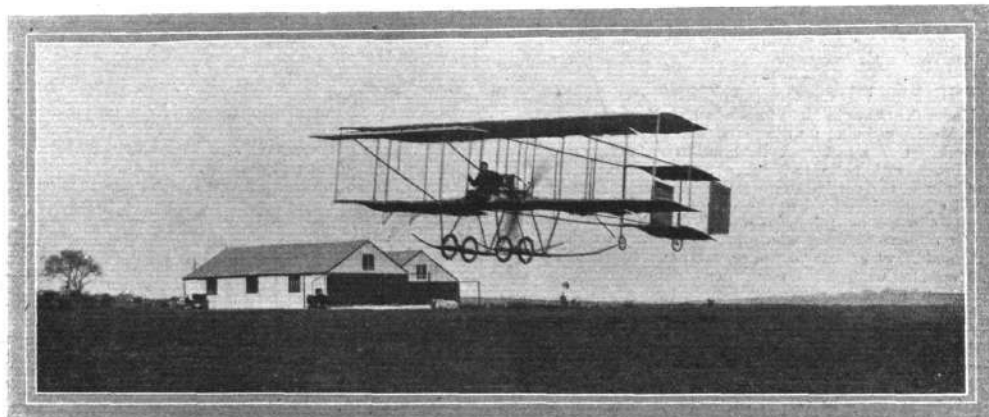
How the Hon. C. S. Rolls, with his 6-cyl. Rolls-Royce car, towed his Short-Wright flyer from Eastchurch to Olympia. The car and "trailer" on the road. When travelling during the night, lanterns were hung round the aeroplane, with some rather amusing results amongst the sleepy waggoners and other traffic met en route.

Aerial Fleet for Russia.

THE proposals of the Russian National Defence Committee providing the construction of an airship fleet and the provision of equipment, was passed by the Duma on Saturday last. In addition it was agreed that the home manufacture of airships should be encouraged, and it was decided to allocate a sum of 25,000 roubles for prizes for aeroplanes. The Minister of War has for some time been engaged in the organisation of an aerial section of the army, and it is hoped to carry out a series of tests with dirigibles in May at St. Petersburg.

Flying at Odessa.

THE erstwhile champion cyclist, Outotchkin, having obtained delivery of a Henry Farman, has taken it to Odessa, where he was flying on the 29th ult. After making a tour of the aerodrome at a height of 20 metres, the aviator flew over the country surrounding the flying ground for about 8 mins. at a height of 50 metres, covering a distance of 6 kiloms. The flyer was loudly cheered at the conclusion of his flight.



Mr. A. Rawlinson flying at Eastchurch this last week-end on his Henry Farman machine.

CORRESPONDENCE.

* * The name and address of the writer (not necessarily for publication) MUST in all cases accompany letters intended for insertion, or containing queries.

Correspondents asking questions relating to articles which they have read in **FLIGHT**, would much facilitate our work of reference by giving the number of the letter.

NOTE.—Owing to the great mass of valuable and interesting correspondence which we receive, immediate publication is impossible, but each letter will appear practically in sequence and at the earliest possible moment.

TO WATERPROOF CALICO.

[441] In response to your correspondent's request, I send herewith two formulae for waterproofing calico. I have tried both, but as the former is quite satisfactory, and is safer to use, I prefer it to the other. Unbleached calico treated in this way does not shrink, and the finer the fabric the better the result. I have coated my own aeroplane with this preparation. The quantities given are given in metric measurement.

No. 1. To every 100 c.c. of cold water add 4 ozs. gelatine, allow to soak for 12 hours, then heat slowly, and when dissolved add 5 c.c. of formalin to every 100 c.c. of above (formalin is a photographic chemical, and is bought liquid in bottles), then brush on the mixture hot on fabric already stretched, and rub it in well. It takes 800 c.c. to coat 100 sq. ft. of surface.

No. 2. A modification of above is to add 3 ozs. bichromate of potash to every 100 c.c. when melted and hot, but the fabric must then be dried in the dark in a dry atmosphere. When dry the fabric is exposed to daylight until the bright yellow turns brownish. This also makes the gelatine insoluble; but bichromate is poison, and should not be allowed to get into any cuts on one's hands, &c.
Belfast. L. E. BLAND.

"FLIGHT GOLF" CHALLENGE (418) ACCEPTED, AND THE DIHEDRAL ANGLE.

[442] I shall be pleased to take up Messrs. Sayers and Ding's challenge for a round of "flight golf," if the contest can take place some time when I am up in London. I should use one of my "scientific monoplanes," which I can fly in any direction under control by adjusting the wings.

I notice Diagram 12, page 239, is wrong; the wording should be, "half a revolution" not "one revolution" and "half of pitch" instead of "pitch."

As a practical aeroplane builder, I must say the correspondence in your valuable paper reaches a high level, and is very interesting. The dihedral angle ideas are now fairly well exploited, and I venture to say for stability alone there is nothing in it, and the dihedral is only of use when the weight carried is high; lower the weight then you will require a straight plane, still further lower the weight, pendulum-wise if you like, and you will then require the dihedral angle inverting, as I found out in the cycloplane.

All three systems give equal stability in straight flight in still air, but I contend each of the three shapes are desirable according to the height position of the weight inertia in order to keep an even keel during side wind disturbances. I think it is more necessary to study this side aspect of an aeroplane, it being immaterial to its stability what the shape is viewed from the front (so long as the weight is central), but very essential to choose the right shape to suit the height of weight compared with the side aspect of the aeroplane.

Cycloplane Works, Gargrave.

JNO. GAUNT.

THE RIGHT CLASS OF WORKMAN.

[443] Under the above heading I notice a letter in **FLIGHT** (407) from a Mr. Morris, claiming for the patternmakers as being, of all the wood-working trades, the most suitable mechanic for the building of the woodwork portion of aeroplanes.

While admiring the partisanship of Mr. Morris for his fellow-tradesmen, I cannot allow his letter to go unchallenged, and must ask him, and also the manufacturers whose sympathies he enlists, not to forget the coachmakers, who certainly should take pride of place in the making of all the wooden portion of an aeroplane.

If Mr. Morris has worked in a motor car shop, he will be aware how soon his branch was superseded by the coachmaker, whose position they then tried to usurp.

Also, seeing that the major portion of the wings and fuselage are made of the hard woods of which the patternmaker uses but little, we have another advantage over them.

If Mr. Morris has seen the splendid examples of the coachmaker's art at the Olympia Show he cannot fail to pay a compliment to a trade he has evidently lost sight of.

Trusting you will find space for this in your valued paper.

Birmingham.

JOHN W. GORDON.

ROCKET ENGINES.

[444] In reply to your correspondent T. J. Bennett (417), your readers may be interested to know that I am now applying for patents for an aeroplane, not only lifted, but entirely propelled, on the rocket, or nozzle, principle, having had considerable success with models constructed on those lines. The models were driven by the ordinary gunpowder rocket of commerce, but the full-sized machine is to be propelled by means of an automatically renewed cylinder of compressed gas. I shall be pleased to explain and show models to anyone sufficiently interested.

Manchester Street, W.

W. LE MAITRE.

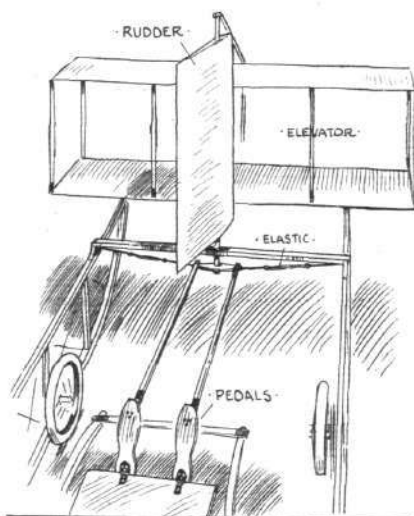
THE SHORT CONTROL.

[445] Referring to your recent description of the new Short biplane, could you give me further particulars relating to the exact arrangement and method of operating the vertical rudder, which I notice you state is controlled by foot?

Liverpool.

JAMES K. CHAPMAN.

[The accompanying sketch clearly illustrates the method of mounting and controlling the rudder on the Short biplane. The rudder is situated immediately behind the elevator, and is attached



to a vertical post that passes through the rudder plane a short distance behind the leading edge, and, therefore, approximately through the centre of pressure for small angles.

The lower end of the rudder-post carries a cross-bar to which two rods are pivoted. These rods are hinged at their other extremities to a pair of hinged pedals. The cross-bar on the lower end of the rudder-post is tied by elastic springs to the side-members of the chassis frame; consequently, the rudder has a normal straight-ahead position, to which it automatically returns of its own accord. Although the elastic springs are sufficiently strong for this purpose, they do not interfere with the delicacy of the control.—ED.]

MR. J. C. LOCKE'S MONOPLANE.

[446] There are three pegs on which I wish to hang this letter. First, the paucity of new ideas at Olympia, to which your correspondent refers in Letter No. 433; second, the fate of poor Le Bion; third, the report I recently saw in one of your contemporaries that Captain Dunn had flown in a biplane of novel design at Shellbeach. Now the connection between these seeming irrelevancies is this, that Captain Dunn's machine constitutes an absolute departure from any type existing at present, thus filling the void so needfully pointed out by yourselves and your correspondent, and that it is—if Captain Dunn's experiences have been similar to mine—the most perfect machine, so far, at least, as stability is concerned, of any now flying. Its gliding powers are marvellous, and had poor Le Bion's machine been a good glider he would have come safely to earth, so far as one can judge from the report.

The details of Captain Dunn's machine given by your contemporary are meagre, but sufficient to identify it as embodying the same theory as I have been working on myself for two and a half years past. The broad principle is that the main planes resemble in plan a wide V. There is no need to give away the details of the theory, but I strongly advise all your readers to go into it for themselves. I have worked it out for myself by means of various models, and the results have been so astonishingly good that I am now building, and have almost completed, a large monoplane glider, about 37 ft. in span from tip to tip of the V. I shall be surprised and disappointed if I do not produce better gliding results than any machine so far has given; and the fact should be plainly recognised, that gliding capacity constitutes the fundamental test of a dynamic flyer.

I shall hope to give you some account of the glider's performances later on, and in the meantime would once more urge your readers to work along these lines for themselves.

Chingford.

J. C. LOCKE.

PROPELLER SPEED.

[447] Has any correspondent got details of the maximum safe speed of revolution of the current types of propellers, as the *Chauvière*, *Intégrale*, *Maxima*, &c.? It is to be supposed that some of the standard types have been tested to bursting point on the testing bench, but no details of this kind have been published. One would be inclined to demand a rather high factor of safety in this direction, as ordinary flight conditions might lead to occasional excesses in speed of revolution, and the stresses on, say, a 2 m. propeller at 1,500 or more revs. work out rather high.

If Mr. Lanchester could be induced to favour us with a discussion of the gyroscopic stresses on crank-shaft of engine supports when making turns with such a propeller at the speed suggested, it would, I feel sure, be welcome to many readers, besides being somewhat surprising to some. In a former article in *FLIGHT* the use of American elm as a timber for framework was, I believe, suggested, though I have been unable to verify the reference. Having got some it appears very suitable on account of its straight grain and freedom from knots, while rough tests seem to show that it is fairly stiff and strong. There is little information in the standard works on its properties, so should be glad to hear if any correspondent has tried it.

Southsea.

R. W. B.

THE UPPER SURFACE LIFT.

[448] I should be glad if you or any reader of *FLIGHT* could tell me whether the question as to the action of air on an aeroplane has been practically solved. We know that when an aeroplane is moved

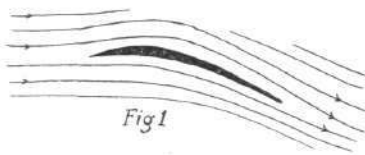


Fig III

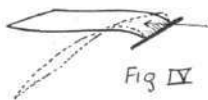


Fig IV

through the air a lifting effect is produced; but is this lift caused by a downward trend being given to the air (Maxim's assertion), as Fig. I, or by a difference of pressures (Philipp's statement), as Fig. II?

Maxim's theory seems the more rational of the two; but how does that account for the fact that if a piece of paper is held by one edge so that it hangs as Fig. III, and a current of air be directed against the top surface only, the paper rises to the position shown in Fig. IV? If the question has not been settled I shall

prove it experimentally myself; but it would be useless devoting very limited spare time to the determining of an already known result.

Sunderland.

ORMSBY SHARE.

[The problem raised by our correspondent is one that confuses many students of flight. The question at issue is whether the lifting effect that is known to be produced by a current of air passing over the upper surface of a cambered aerofoil is properly within the realm of statics or dynamics. We had occasion to deal with this matter before, when we pointed out that it is in any case essential to start the investigation from a dynamical standpoint, inasmuch as the broad subject itself is aerodynamics.

It is, therefore, necessary to consider how the lifting effect can be produced as the result of the air being in motion. In this connection it is important not to overlook the effect of the initial air-stream on the surrounding medium, as the first effect of the disturbance is to set in motion a certain system of air-streams that depend for their direction on the nature of the bodies across which they pass. Now in the case of the flexible piece of paper the body itself conforms to the air-stream, and the resultant direction of the air-stream will be different in that case to what it is when the air-stream flows over a rigid cambered aerofoil.

In both cases the setting in motion of a stream of air across the upper surface disturbs air formerly quiescent in the vicinity of the lower surface, and creates the system that produces the phenomenon of lift. It is the system as a whole that it is necessary to consider, and that system is in principle the same as that associated with the air stream surrounding an aerofoil in flight.

On both sides of the aerofoil the air stream conforms to the camber. On the lower side this conformity is the direct mechanical result of using a cambered section, the air being simply forced to swerve downwards, since it cannot pass through the material. On the upper surface the air stream also conforms to the camber, not because the actual solid material forces it to do so, but because it is the path of least resistance brought about by the system as a whole. The net result of this swerving of the upper and lower streams is the imparting of a downward acceleration to a considerable volume of air, and the consequent creation of an upward reaction in accordance with Newton's law. This upward reaction constitutes the lifting power of the aeroplane.

The question of the actual means of transference of the reaction of the air to the aeroplane is one that probably involves the use of the static terms "pressure" and "suction": the pressure being exercised on the lower surface and the suction on the upper surface. In the use of these terms, however, it is, we think, very important that readers should not picture to themselves the creation of an actual vacuum space—something like a dead-water region—on the upper surface of the aeroplane. "Dead-water" or still air-regions are formed behind objects that have abrupt angles; but the dead-water is not a vacuum. The very purpose of using a smooth gradual curve for the camber of an aerofoil is to avoid the formation of dead-water. The air everywhere in the vicinity of an aerofoil conforms to the general stream, so that the only grounds on which the idea of static "suction" can be introduced is that it may be the means of transferring the lift from the air to the solid object; and in this case it is only possible to admit the idea to the extent of supposing that there is a tendency for the air film immediately adjacent to the upper surface to tear away from its adhesion, and thereby to tend to create a "vacuum film."—ED.]

SOME OTHER ANSWERS AND QUERIES.

Answers.

- [449] **Model Designs** (424).—V. L. Thompson, of Ramsgate, recommends "Model Aeroplanes: How to Build and Fly Them," by E. W. Twining.
- [450] **Blériot Model Working Drawings** (435).—A. Melcombe, Castle Road, Bedford, writes that he can supply these.
- [451] **Model Propellers** (439).—A. Melcombe, Castle Road, Bedford, states that for the size model mentioned a 12-in. Aerosped propeller would be suitable.
- [452] **Glasgow Accessory Maker**.—Mr. G. White recommends the firm of Elcon Manufacturing Co., 48, Oswald, Glasgow, who supply cane or wood at 3 ft. 1d. They issue a catalogue of all aeroplane accessories, and likewise advertise in *FLIGHT*.

Queries.

- [453] **Elastic Motors**.—Mr. A. Tomlinson, of Birmingham, who is building a model Blériot, one-eighth full size, would like to know the probable amount of elastic required for the motor, and any hints on the bracing of these models, as he finds great difficulty in making them sufficiently rigid.
- [454] **Model Plans Wanted**.—R. W. M., Blackpool, inquires for plans of a model aeroplane or glider.

Mr. Hornstein's Good Friday Flight.

SOME further particulars have been given to us by an independent eye-witness concerning the flight which was made by Mr. Hornstein with his machine on Good Friday, and about which—as also his unfortunate accident on the following Sunday—we reported in brief last week. It seems that there were at the time plenty of spectators about, to all of whom the outstanding feature of the performance was the remarkably high rate of speed that was maintained. Apparently a run of about 25 metres was taken before actually leaving the ground, and then the distance travelled was 2.1 kiloms., at a height varying between 12 and 18 metres from the ground. Amateur clocking credited the time taken as being but 48 secs., though needless to say this is entirely unofficial as a record—such as it would seem to constitute.

Ground was regained in a ploughed field, on to which the machine alighted without sustaining injury of any kind, and this particular machine, which is one of those that Mr. Hornstein has built in England, is equipped with an 8-cyl. Jap engine of 35-h.p. On a new machine which he has in course of construction, a trial is to be given to an 80-h.p. engine of Italian origin that has a special system of air-cooling embodied in it.



Re-modelling Aeroplanes.

A UNIQUE departure in the aviation business is the re-modelling department which has just been started by Messrs. A. V. Roe and Co. If an aviator has built a machine and then finds it is not satisfactory, this firm, if they think it is possible to make it fly, will quote a price for re-modelling, and for this price they will guarantee to make the machine fly.

"Cleaneasy."

A PASTE that has a fine gritty base has been prepared by the Cleaneasy Company, as a soap especially suited to the requirements of motorists and aviators, whose hands are more than liable to become grimy with their work. There is nothing so difficult to remove as the greasy dirt that comes from tinkering with machinery, but "Cleaneasy" makes washing a simple and pleasant matter, and what is of great importance is that this particular soap is very effective even with cold water. It is economical to use, and is put up in various convenient sized tins, the smallest of which only costs 1d. It is well worth while carrying one of these tins and a small towel under the seat or in one of the pockets of the car, so as to be convenient for a wash en route in the event of a breakdown.



NEW COMPANIES REGISTERED.

Aeroplane Supply Co., Ltd., 111, Piccadilly, W.—Capital £100, in £1 shares.

British Aeronautical Co., Ltd., Dewar's House, 11, Haymarket, S.W.—Capital £2,000, in £1 shares.

Edward Mines Aviation Syndicate, Ltd., 26, Shaftesbury Avenue, W.—Capital £1,500, in 5s. shares. Formed to purchase a Farman type all-British aeroplane, as per agreements with the Aerial Manufacturing Co. of Great Britain and Ireland, Ltd., and Edward Mines, and to enter the same for races, competitions, &c.



PUBLICATIONS RECEIVED.

Les Aeroplanes: Considerations Theoriques. By Paul Raybaud. Paris: F. L. Vivien, 20, Rue Saulnier. Price 1 fr.

Petite Encyclopedie Aeronautique. By L. Ventou-Duclaux. Paris: F. L. Vivien, 20, Rue Saulnier. Price 1 fr. 75 c.

Annual Report of the Board of Regents of the Smithsonian Institution. 1908. Washington, D.C., U.S.A.: Smithsonian Institution.

The Emperor of the Air. By George Glendon. London: Methuen and Co. Price 6s. net.

Catalogue.

The Aviator's Storehouse. A. V. Roe and Co., Brownsfield Mills, Manchester.

DIARY OF FORTHCOMING EVENTS.

British Events.

1910.		1910.	
May 14-21	Huntingdon Meeting.	July 11-17	Bournemouth Flight Meeting.
June 4-11	Doncaster Meeting.	July 28-Aug. 10	Belgium. Lancashire Meeting.
June 25-July 2	Wolverhampton Meeting.	Aug. 6-13	Lanark Meeting.

Foreign Events.

1910.		1910.	
April 2-10	Biarritz.	July 14-24	Rheims to Brussels, cross-country event.
April 3-10	Cannes.	July 24-Aug. 10	Belgium.
April 10-25	Nice.	Aug. 25-Sept. 4	Deauville.
May 10-16	Berlin.	Sept. 8-18	Bordeaux.
May 14-22	Lyons.	Sept. 24-Oct. 3	Milan.
May 20-30	Verona.	Oct. 18-25	America. Gordon-Bennett Balloon Race.
June 5-12	Vichy.	Oct. 25-Nov. 2	America. Gordon-Bennett Aeroplane Race.
June 5-15	Budapest.		
June 18-24	St. Petersburg.		
June 26-July 10	Rheims.		

Aeronautical Patents Published.

Applied for in 1909.

Published April 7th, 1910.

6,378.	G. P. OTTINO AND A. WYLLIE.	Aerostatic and heavier-than-air machines.
6,414.	H. B. MOLESWORTH.	Aerial machines and propellers.
7,792.	J. D. ROOTS.	Flying machines.
11,523.	B. STRETTON.	Flying machines.
15,110.	A. J. FREDRIKSON.	Airships.
17,131.	J. MUCKLE.	Ships for aerial navigation.
23,844.	R. ALEXANDER-KATZ.	Testing flyi. g machines.

BACK NUMBERS OF "FLIGHT."

SEVERAL back numbers are now very scarce, and have been raised in price as follows:—

No.	2, Jan.	9, containing	Table of Propellers ...	s. d.
6, Feb.	6	"	"How Men Fly" ...	1 0
8	" 20	"	Aeronautical Bibliography.	
		"	Wright Bros.' Elevator Patents.	
10, Mar.	6	"	Flying Ground at Farnbridge	1 0
		"	Illustrated Glossary.	
		"	Human Side of Flying ...	1 0
		"	Aero Club Ground at Shellbeach.	
		"	Military Aeronautics.	
12	" 20	"	Souvenir Supplement ...	1 6
15, Apr.	10	"	Engines at Olympia ...	1 0
16	" 17	"	Prize List ...	3 6
		"	Models at Olympia.	
31, July	31	"	Blériot Flyer ...	2 0
		"	(Full page drawing.)	

Other back numbers (excepting Nos. 3 and 4, which are out of print), post free, 1d. each (including descriptions and scale drawings of the Voisin, Curtiss, Cody and Farman biplanes, the Santos Dumont, Antoinette, and Grade monoplanes, and of a full-size Wright glider).

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